

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/771,061	KANG, KYOUNG-HO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jimmy H. Nguyen	2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/4/2004.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                     | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

***REASONS FOR ALLOWANCE***

1. The following is an examiner's statement of reasons for allowance: the claimed invention is directed to an apparatus and a method for displaying a grayscale of a plasma display panel, by which an externally input image signal is divided into frames and each frame is divided into a plurality of subfields allocated a predetermined brightness value. Independent claims 1 and 6 identifies the uniquely distinct features, “detecting a frequency of each grayscale, where the frequency indicates the number of cells to be displayed for each grayscale in a frame; comparing the frequency of each grayscale with a predetermined reference value; and adjusting at least one among the number of grayscales in the frame and the number of subfields in the frame according to a result of the comparison to set subfields in the frame.”

Independent claims 15 and 18 identifies the uniquely distinct features, “an image signal detection unit, which detects a frequency of each grayscale, where the frequency indicates the number of cells to be displayed for each grayscale, in a frame of the image signal; an image characteristic determination unit, which determines an image characteristic necessary for grayscale display using the frequency of each grayscale detected by the image signal detection unit; a subfield setting unit, which sets the number of grayscales in the frame and the number of subfields in the frame according to the image characteristic determined by the image characteristic determination unit”.

The closest prior art, Kang et al. (US 2003/0169217 A1) discloses a related apparatus and method for displaying a grayscale of a plasma display panel, by which an externally input image signal is divided into frames and each frame is divided into a plurality of subfields allocated a predetermined brightness value, the apparatus (see Fig. 1) comprising an average level detector

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(8) for detecting an average brightness of the image signal in a frame (paragraph 0067), a total gray level number determiner (9) for adjusting a total gray level number **according to the detected average brightness of the image**, means for adjusting a number of subfields in the frame **according to the detected average brightness of the image** (see paragraphs 0014, 0015); and a unit (elements 4-7, 11 and 16, see Fig. 1) for forming data for each subfield such that an image can be displayed at a brightness level to each subfield, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHN  
September 1, 2006



Jimmy H. Nguyen  
Primary Examiner  
Technology Division: 2629